

CLAIMS

1. An aircraft piloting system, at least for piloting the aircraft during a non precision approach with a view to a landing, said piloting system (1) comprising:
 - information sources (2) which provide at least one indication of position relating to the actual position of the aircraft and information making it possible to characterize a virtual approach axis;
 - an information processing unit (3), which processes information emanating from said information sources (2) and which is able to determine lateral and vertical deviations between the actual position of the aircraft and the position that it would have if it were on said virtual approach axis; and
 - a user device (4), which uses the results of processings implemented by said information processing unit (3),wherein said information processing unit (3) comprises a landing aid multimode receiver (5) intended for implementing a precision approach and moreover comprising an assisted approach mode function (6), which is integrated into said receiver (5) and which is able to implement a non precision approach, by determining the lateral and vertical deviations between the actual position of the aircraft and the position that it would have if it were on said virtual approach axis.
2. The piloting system as claimed in claim 1, wherein said landing aid multimode receiver (5) comprises a satellite-based positioning function (18), linked with a satellite-based positioning system.
3. The piloting system as claimed in claim 1,

wherein said information sources (2) comprise a flight management computer (8).

4. The piloting system as claimed in claim 3,
5 wherein said information sources (2) comprise, moreover, a plurality of sensors (10, 11, 12) which are connected to said flight management computer (8).
- 10 5. The piloting system as claimed in claim 1, wherein said information sources (2) comprise, moreover, an inertial reference unit (12) which determines a first position indication of the aircraft.
- 15 6. The piloting system as claimed in claim 5, wherein said inertial reference unit (12) provides said first position indication to a flight management computer (8), which transmits this
20 first position indication to said landing aid multimode receiver (5).
- 25 7. The piloting system as claimed in claim 5, wherein said inertial reference unit (12) provides said first position indication directly to said landing aid multimode receiver (5), by way of a specific link (21).
- 30 8. The piloting system as claimed in claim 7, wherein said landing aid multimode receiver (5) comprises a satellite-based positioning function (18) linked with a satellite-based positioning system, which determines a second position indication, and wherein said landing aid multimode
35 receiver (5) determines on the basis of said first and second position indications a first refined position indication.
9. The piloting system as claimed in claim 5,

which comprises a satellite-based positioning device (16) which determines a third position indication which it provides to said inertial reference unit (12), and wherein said inertial reference unit (12) determines a second refined position indication on the basis of said first and third position indications.

10. The piloting system as claimed in claim 9,
wherein said inertial reference unit (12) provides said second refined position indication to the flight management computer (8), which transmits this second refined position indication to said landing aid multimode receiver (5).

11. The piloting system as claimed in claim 9,
wherein said inertial reference unit (12) provides said second refined position indication directly to said landing aid multimode receiver (5), by way of a specific link (20).

12. The piloting system as claimed in claim 5,
which comprises a satellite-based positioning device (16) which determines a fourth position indication which it provides to a flight management computer (8), wherein said inertial reference unit (12) provides said first position indication likewise to said flight management computer (8), and wherein said flight management computer (8) determines, on the basis of said first and fourth position indications, a third refined position indication, which it transmits to said landing aid multimode receiver (5).

13. An aircraft,
which comprises a piloting system (1) such as that specified under claim 1.